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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,977	09/18/2003	Anthony Bloesch	MS302062.1/MSFTP487US	8617

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EXAMINER

INGBERG, TODD D

ART UNIT	PAPER NUMBER
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2193

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/666,977

Applicant(s)

BLOESCH ET AL.

Examiner

Todd Ingberg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4, 8, 11 - 13, 18, 22, 29 and 35 is/are pending in the application.
- 4a) Of the above claim(s) 2, 3, 5-7, 9, 10, 14-17, 19-21, 23-28, 30-34 and 36-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 8, 11 - 13, 18, 22, 29 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1, 4, 8, 11 – 13, 18, 22, 29 and 35 have been examined.

Claims 2-3, 5-7, 9-10, 14-17, 19-21, 23-28, 30-34 and 36-41 have been cancelled.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 4, 8, 11 – 13, 18, 22, 29 and 35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result. No physical transformation is recited and additionally, the final result of the claim is for an object oriented modeling system (Aspect Oriented not explicitly claimed) which is not a tangible result because not updating, storing or displaying to a computer readable medium is claimed. The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. §101.

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf

The claims must claim result that is tangibly embodied. Displaying to a monitor, updating to storing to a computer readable medium etc. *The result* of the operation is not clearly being claimed to be stored, updated or displayed etc.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 8, 18, 22, 29 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by the work of the Industry Standards Group Object Management Group (OMG), as documented in their April 2000, publication Externalization Service Specification, Version 1.0.

Claim 1

OMG anticipates a system stored on computer readable media, comprising: an input component that reads a meta-model to determine a structure of an item (OMG, Interface, pages vii, 1-2 to 1-8), and the meta-model comprising at least one meta-relationship (OMG, pages 1-8 to 1-9) and at least one meta-class (OMG, page 1-10, Figure 1-5), the at least one meta-relationship describing one or more relationships between meta-classes (OMG, pages 2-1 to 2-7 and pages 2-15 to 2-19) and the at least one meta-class being a class encapsulating data employed to represent another class (OMG, page 1-11, Stream – Holds external form of objects).

Claim 4

The system of claim 1, the input component is associated with services that operate in conjunction with an operating system framework.

Interpretation: The requirement for an operating system framework is deemed inherent, because objects are runtime and require operating system support.

Claim 8

The system of claim 1, the item is a document. (OMG, page 2-12, Figure 2-1)

Claim 18

The system of claim 1, the at least one meta-relationship optionally including at least one meta-role. (OMG, pages 1-2, last sentence before “1.2 Service Structure”, page 1-10, Figure 1-5).

Claim 22

OMG anticipates a data management system stored on computer readable media, comprising: a processing component that receives an item that comprises a meta-model (Interface of claim 1), the meta-model comprising one or more meta-classes (OMG, pages 1-10 to 1-12), the one or more meta-classes comprising classes encapsulating (OMG, pages 1-11 to 2-3), data employed to represent another class (OMG, page 1-11, Stream), and an analysis component that

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determines at runtime a structure of the item by reading the meta-model (OMG, pages 2-1 to 2-18).

Claim 29

OMG anticipates a computer executable instructions for performing a method to process meta-data (OMG, pages 1-2 to 1-12), the computer executable instructions stored on computer readable media, the method comprising: receiving at least one meta-model object (OMG, pages 1-10 to 1-12), the meta-model object comprising at least one meta-relationship between two or more meta-model classes determining the structure of an item according to the meta-relationship between the two or more meta-model classes (OMG, pages 2-1 to 2-18).

Claim 35

OMG anticipates a computer implemented system stored on computer readable media, the system to facilitate determining the structure of an item (OMG, pages 1-2 to 1-12), comprising: means for modeling a meta-data object (OMG, page 1-10), the meta-data object comprising a meta-model (OMG, page 1-10), the meta-model comprising a meta-relationship between two or more classes (OMG, pages 1-10 to 1-12); means for determining the structure of the item at least in part via the meta-relationship (OMG, pages 2-1 to 2-18).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over OMG in view of Access as taught by Mastering Microsoft Office Professional from 1997.

Claim 11

Although, OMG teaches the use of meta-classes and the storage of meta class they do not explicitly mention a relational database. It is Microsoft Access that mentions relational database with their commercial product Access (Access, page 829). Therefore, it would have been obvious to one of ordinary skill in the art to utilize the teaching of the standards organization OMG and associate a meta-class with a relational database, because both modeling relational databases with entity-relational diagrams is grossly well known as is the knowledge of how to store to a RDMS.

Claim 11

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The system of claim 1 the at least one meta-class is associated with a relational database.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over OMG in view of MS Visual Basic.

Claim 13

The application programming interface of claim 9, the meta-class is identified via at least one of a name (OMG, page 1-2, node name is the object name) and a caption to facilitate application development (VB6, pages 65-66, caption). OMG provides meta-information and VB6, teaches the use of caption for identifying programming constructs (controls in this section of the reference). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of OMG and Microsoft, because the well established use of captions assist in visual identification in software development environments.

Allowable Subject Matter

7. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant should read page viii bottom of the page last section.

Claim 12

The system of claim 1, the at least one meta-class is identified via a globally unique identifier.

Examiner's Comment

8. The OMG reference in Figure 1-5 uses Booch notation. Examiner hold one of ordinary skill in the art typically knows UML or it's primary founding object notation Object Modeling Technique (OMT) (A.K.A. Rumbaugh notation). For additional information on Booch notation Applicant can obtain Grady Booch's text book, "Object-Oriented Analysis and Design with Applications" second edition published September 10, 1993, if needed. Grady Booch is recognized as one of the founders of object technology.

Response to Arguments

9. Applicant's remarks and a telephone conversation mentioned terms and items in previous Final Action that the Examiner did not cite on the 892. This need requires this action to be a Final Action and not an Advisory Action.

Applicant's Remarks

"Claims 1, 4, 8, 11-13, 18, 22, 29 and 35 are currently pending in the subject application and are presently under consideration. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments herein.

Rejection of Claims 1, 4, 8, 11-13, 18, 22, 29 and 35 Under 35 U.S.C. § 101

Claims 1, 4, 8, 11-13, 18, 22, 29 and 35 stand rejected under 35 U.S.C. §101 as allegedly being directed towards non-statutory subject matter. Withdrawal of this rejection is requested for at least the following reasons. The subject claims produce a useful, concrete, and tangible result, and therefore are directed towards statutory subject matter.

Because the claimed process applies the Boolean principle [abstract idea] to produce a useful, concrete, tangible result ... on its face the claimed process comfortably falls within the scope of § 101. *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed.Cir. 1999) (Emphasis added); See *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed.Cir.1998). The inquiry into patentability requires an examination of the contested claims to see if the claimed subject matter, as a whole, is a disembodied mathematical concept representing nothing more than a "law of nature" or an "abstract idea," or if the mathematical concept has been reduced to some practical application rendering it "useful." *AT&T* at 1357 citing *In re Alappat*, 33 F.3d 1526, 31 1544, 31 U.S.P.Q.2D (BNA) 1545, 1557 (Fed. Cir. 1994) (Emphasis added) (holding that more than an abstract idea

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was claimed because the claimed invention as a whole was directed toward forming a specific machine that produced the useful, concrete, and tangible result of a smooth waveform display).

Independent claim 1 (and similarly independent claims 22, 29 and 35) recites a system stored on computer readable media, comprising: an input component that reads a meta-model to determine a structure of an item, the meta-model comprising at least one meta-relationship and at least one meta-class, the at least one meta-relationship describing one or more relationships between meta-classes and the at least one meta-class being a class encapsulating data employed to represent another class. Accordingly, the subject claims yield a useful, concrete and tangible result relating to supporting meta-data manipulations and interactions. (See Specification pg. 4, In. 1-3). In particular, the claimed subject can provide a meta-model object to support a higher level abstraction for data classes than is provided by conventional object models. Therefore, the claimed subject matter can enable developers to describe attributes, relationships, and respective constraints for meta-data that simplifies program development and operating system interactions and thus significantly reduces the cost of development and increases the quality of software design tools and editors. (See Specification pg. 5, In. 21-23). This is clearly a useful, concrete and tangible result.

Moreover, the subject independent claims recite determining the structure of an item according to a meta-model or a meta-relationship. Determining the structure of an item is a useful, concrete, and tangible result because the computer readable medium can be updated with the structure of an item. For example, one of the many useful aspects about determining the structure of an item is that it allows the Model Data Cache Manager to determine which data needs to be updated in memory at any given time and load or unload data to match those needs. (See Specification pg. 13, In. 16-18 and Fig. 2, item 230).

Accordingly, it is respectfully submitted that claims 1, 4, 8, 11-13, 18, 22, 29 and 35, as previously presented, fall squarely within the purview of AT&T Corp. Excel Communications, Inc. Thus, claims 1, 4, 8, 11-13, 18, 22, 29 and 35 are eligible for patenting under 35 U.S.C. § 101 and the rejection of these particular claims is errant. It is respectfully requested that this rejection be withdrawn."

Examiner's Response

The current Office policy requires, the **result** of the operation to be clearly claimed as stored, updated or displayed etc. to a tangible medium.

Rejection of Claims 1, 4, 8, 11-13, 18, 22, 29 and 35 Under 35 U.S.C. 102(b)

Applicant's arguments are moot in view of the new grounds of rejection.

Rejection of Claim 13 Under 35 U.S.C. §103(a)

Applicant's arguments are moot in view of the new grounds of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

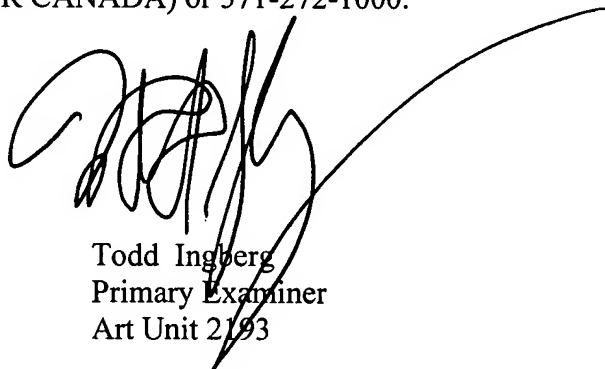
Correspondence Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd Ingberg whose telephone number is (571) 272-3723. The examiner can normally be reached on during the work week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Todd Ingberg
Primary Examiner
Art Unit 2193

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